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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHEN, ALAN S

ART UNIT PAPER NUMBER

2182

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/738,807	<b>Applicant(s)</b> LAWRENCE, JEREMY	
	<b>Examiner</b> Alan S. Chen	<b>Art Unit</b> 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 47-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED FINAL ACTION

### *Response to Arguments*

1. Applicant's arguments filed 03/16/2006 have been fully considered but they are not persuasive.

2. Applicant mainly argues that Arrow's management stations, element 160, manage VPN units, and thus, all management commands are "VPN" commands. Examiner does not agree with this strict interpretation as discussed below.

First, it is necessary to distinguish the type of commands that the VPN management unit sends. Strictly speaking "VPN management commands" in line with the applicant's specification, deal with functions that involve encryption of a VPN. These functions include encapsulation, routing and forwarding of packets (specification, pg. 10, lines 10-20). On the other hand, "non-VPN management command" would logically encompass commands outside of the functions stated above.

Now turning to Arrow, one instance in which the VPN management station performs "VPN management commands" per the definition above is by issuing "VPN unit objects". VPN management objects comprises encryption, authentication and compression algorithms to be used by a VPN (Column 15, lines 15-25). For "non-VPN management commands", Arrow discloses configuration commands sent to the VPN units which, in and of itself, **does not** involve encryption of the VPN (the secure tunnel), but rather are commands that initialize, update, etc., the VPN unit. Installing a new operating system on the VPN unit for instance, requires the VPN management station to handle request commands to/from the VPN unit. This is construed to be a "non-VPN

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management commands since, it is not directly establishing a secure channel. It is important to note that these non-VPN commands themselves sent over a secure channel (Column 13, lines 5-20 disclose authentication procedures between the VPN management station and the VPN unit). Related commands to check for error or success of installation of the operating system are also "non-VPN commands" (Column 14, lines 40-64).

Again, just because the management station communicates with the VPN unit does not mean that all the commands are "VPN commands". VPN commands directly relate with encryption and security of the packets that create the secure channel, while non-VPN commands deal with configuration of the VPN unit itself.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 47-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While a negative limitation or exclusionary proviso is permissible in the claims, it must have basis in the original disclosure (see *MPEP 2173.05(i)*). The

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amendment now includes the limitation "non-VPN", particularly how non-VPN management commands are sent over a VPN. Applicant's specification does not appear to exclude non-VPN management commands from the VPN. In fact it appears the management commands are indeed VPN commands since they configure the VPN network environments (Figs. 6 and 7 show management VPN modules, element 655, which the management commands appear to configure). Page 8, lines 1-6 and page 10, lines 15-22 of the specification appears to be the only place where "non-VPN" is stated. However, it is not specified that the management commands themselves are non-VPN, but only that the links that the management commands are transferred over *can* be non-VPN.

6. Claims 47-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amended claims state "non-VPN management commands" being sent/carried over a VPN. If these management commands are indeed carried over VPN, they would in fact be VPN management commands. It is recommended that applicant better differentiate exactly what are VPN and non-VPN management commands. Examiner will assume generally that the management commands themselves are not involved in the security of the VPN, hence, non-VPN.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 47-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Arrow.
9. Per claims 47, 52, 56, 61 and 66, Arrow discloses a method, network device and machine readable medium for secure in-band management of a network device (Fig. 2 and 3 show what happens at the VPN unit, utilizing compression, encryption and authentication rules to meets the definition of VPN, e.g., see Netwon's Telecom Dictionary; the network device is the entire unit, elements 140 and 145 of Fig. 1) that provides routing and forwarding services (both routing and forwarding services are provided by the VPN unit; Fig. 2, element 220-250 expressly show the VPN processing the message packet and forwarding the packet to the destination address; note that while there is a separate router for VPN to LAN connectivity, e.g., Fig. 1, element 110 to 114 to 115, it is clear that the same type of routing is performed at the remote clients, e.g., packetizing data to be sent over the public network, which the VPN unit is actually part of and hence the entire remote client is considered the "network device", e.g., 140 and 145 is a network device), the method comprising: configuring a VPN for the network device (VPN unit configures packets as for VPN by compression, encryption and authentication, element 240); linking the VPN to a source of non-VPN management commands (Fig. 1, VPN management station 160 is linked to VPN unit via VPN; Column 13, lines 3-15 and Fig. 7 show that the VPN unit is connected by VPN to the

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management station; Column 14, the management command sending VPN unit configuration commands, such as update OS, check for VPN unit errors, that do not deal directly with the secure VPN channel itself, e.g., no encryption algorithms, etc.); using the VPN to carry the non-VPN management traffic from the source of management commands to the network device (once authenticated, stream of data can pass through VPN from the management station 160 to the VPN unit, Column 13, lines 20-25); and using the network device (Fig. 7 is the OS of the VPN module which is part of the overall network device, elements 140 and 145), forwards non-VPN management commands to a management port of the network device through a VPN module (Fig. 7, elements 717 is the port where management data comes in and out of the VPN unit, which here is construed to be the VPN module; regarding what is forwarded out of the VPN unit, Arrow discloses various errors/confirmations that are reported back to the management station based on authentication results, Column 13, lines 15+). Note that the VPN used by Arrow by definition uses a tunneling protocol. Per Netwon's Telecom Dictionary, tunneling is defined as: "...the process of encapsulating an encrypted data packet in an IP packet for secure transmission across an inherently insecure IP network, such as the Internet". This is precisely what Arrow is performing, where the data is compressed, authenticated and encrypted and sent over the Internet (Fig. 2, elements 240 and 250). Further note the plurality of the network devices (Fig. 1 shows multiple remote client and VPN Units), all being capable of performing routing/forwarding and each having the management port of Fig. 7 to transfer router information (per claims 66).

10. Per claims 48,57 and 62, Arrow discloses the network device includes a routing and forwarding module (Fig. 7, elements 716 and 724 both route/forward the configuration data) and the management VPN module (VPN management station 160) that is coupled to the VPN unit via the public network (Fig. 1).

11. Per claims 49,53,58,63 and 67, Arrow discloses the network devices being a gateway (Fig. 1) per the definition of gateway from Netwon's telecom dictionary: "...an entrance and exit into a communications network". The gateway also meets the stricter definition of the word, which is a node between two networks, which is shown in Fig. 1, where the VPN unit and router, elements 114 and 116 sit between the public network and the LAN.

12. Per claims 50,54,59,64 and 68, Arrow discloses the network device can perform Internet Protocol services (Column 6, lines 50-55)

13. Per claims 51,55,60,65 and 69, Arrow discloses the source of non-VPN management commands is one of a non-VPN management device (management devices perform both configuration and encryption functions, so is both a non-VPN and VPN device) and non-VPN management function (Fig. 1, element 160 is the management device, Column 13, lines 5+ disclose configuration request commands that are performed as a function of the management station).

### ***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC  
05/24/2006



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